

S/N 09/834095



#14
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yoshihiro Kawaoka

Examiner: Terry McKelvey

Serial No.: 09/834095

Group Art Unit: 1636

Filed: April 12, 2001

Docket: 800.026US1

Title: VIRUSES COMPRISING MUTANT ION CHANNEL PROTEIN

RESPONSE TO RESTRICTION REQUIREMENT

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Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

In response to the Restriction Requirement mailed April 22, 2003, Applicant provisionally elects, with traverse, the species isolated and purified recombinant influenza virus comprising a mutant ion channel protein which lacks or has reduced activity relative to the corresponding wild-type ion channel protein, wherein the mutation is a deletion in the transmembrane domain of the ion channel protein, and wherein the mutation does not alter the *in vitro* replication of the virus but is associated with attenuation of the virus *in vivo*. Claims 1, 5-6, 9, 25-26 and 31 of the elected group read on the elected species. Reconsideration and withdrawal of the species election in view of the remarks below is respectfully requested.

The requirement to elect a species is traversed on the basis that a generic claim directed to isolated and purified recombinant influenza virus comprising a mutant ion channel protein which lacks or has reduced activity relative to the corresponding wild-type ion channel protein (claim 1 as filed) and a subgeneric claims directed to a recombinant influenza virus comprising a mutant ion channel protein with a deletion which lacks or has reduced activity relative to the corresponding wild-type ion channel protein (claim 5 as filed), comprising a mutant ion channel protein with at least one amino acid substitution which lacks or has reduced activity relative to the corresponding wild-type ion channel protein (claim 3 as filed), or comprising a chimeric protein comprising the mutant ion channel protein (claim 2 as filed) have already been searched and examined, as evidenced by the Office Action dated November 4, 2002.

The requirement to elect a species is also traversed on the basis that the disclosed species have a disclosed relationship, i.e., the mutations are in the transmembrane region and yield a



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Page 2

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virus that is attenuated *in vivo* but not *in vitro*. Thus, the requirement for an election of species is properly traversed and reconsideration is respectfully requested.

The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number if there are any questions regarding this Response or if prosecution of this application may be assisted thereby.

Respectfully submitted,

YOSHIHIRO KAWAOKA,

By his Representatives,

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Date

JUNE 12, 2003

By

Janet E Embretson

Reg. No. 39,665

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O.Box 1450, Alexandria, VA 22313-1450 on this 12th day of June, 2003.

Name

Dawn M. Koike

Signature

Dawn M. Koike